

Global Hawk Versus U-2



Global Hawk on the Washington Mall.

The Pentagon is to determine whether the USAF should supplement its small fleet of aging Lockheed Martin U-2 manned reconnaissance aircraft or give the Northrop Grumman RQ-4A Global Hawk UAV a bigger intelligence-gathering role.

USAF officials recently asked Ryan Aeronautical Center officials if they could accelerate the Global Hawk's development to avoid the need to restart the U-2 production line. The USAF is interested in an expedited engineering and manufacturing development (EMD) effort while adding a signals intelligence (SIGINT) mission.

Northrop Grumman told the USAF that a one-year EMD effort is feasible, as is giving the RQ-4A a SIGINT role. Northrop Grumman can produce up to 10 Global Hawks a year and it hopes to supply at least 100 to the USAF.

The current Block 5 Global Hawk would be followed by the Block 10 with greater payload capabilities. Giving the UAV stealth features is envisioned, making the RQ-4A a potential replacement for the cancelled Lockheed Martin/Boeing DarkStar UAV. Senior USAF officials are said to be seriously considering major modifications to the Global Hawk to make it more versatile. The Block 20 version would have a larger wing and a more powerful powerplant, allowing it to carry more than 2,000 pounds of payload.

In 1997, Lockheed Martin Skunk Works unsuccessfully pitched an unmanned variant of the U-2 to the USAF. The U-2U would have augmented the manned U-2S for very-long-duration high-risk, missions.

Since then, the firm has advocated new production of the U-2 to avoid a mission shortfall beginning in the 2006 timeframe. The USAF has 31 U-2S and four U-2ST trainer aircraft. However, only one-third are available for missions at any given time. They are currently undergoing a major cockpit and sensor upgrade to keep the fleet operational through 2015 or beyond.

The USAF's Air Combat Command last year fought unsuccessfully for an attrition buy of 13 additional U-2S aircraft, saying each improved spy craft would cost \$28 million. In comparison, each production Global Hawk would cost an estimated \$15 million, offering much longer range and endurance than the U-2. But the U-2S has twice the payload, can operate easily in civil airspace and is more versatile.

Senior DoD officials back the Global Hawk, but USAF Secretary Whitten Peters says Global Hawk and the U-2 can peacefully co-exist. "We think the way to go is an integrated Global Hawk/U-2 solution. Each has capabilities the other does not, each has shortfalls the other does not," says Peters. But a funding shortfall remains the critical issue.

This Just In...

USN RADM Jack Chenevey, PEO (W), says his organization and AUVSI have teamed up to give attendees of AUVSI's 28th Annual Symposium and Exhibition to be held Baltimore, MD, in 2001, a special treat.

He used the induction of the AAI/LAI Pioneer UAV to the Smithsonian Institution's National Air and Space Museum to announce that he will be hosting "the first ever UAV expo at our Webster Field (MD) site in July of 2001, to be held in conjunction with AUVSI's annual conference. We expect to have UAVs from around the world flying and demonstrating, in what is sure to be a memorable event. Keep that one on your radar for next year," he added.

The must-attend AUVSI meeting will take place July 31-August 2, 2001 at the Baltimore Convention Center. More

details regarding the symposium, exhibition and expo will be provided in future issues of *Unmanned Systems* magazine.

NASA to Use UAVs for Earth Science Research

NASA has narrowed down the list of potential research organizations that would perform earth science research using UAVs, thus pioneering the use of drones by the US space agency.

The eleven earth science projects were culled from the 45 submitted to NASA. The finalists come from three NASA centers, four universities, a federally-funded lab and one other federal agency. They have been awarded small grants to refine plans. In early 2001, NASA will review those plans and select two or three for full development.

NASA has budgeted \$12 million to fund the research which runs through 2003. The UAVs will carry scientific payloads designed to understand and monitor the global environment.

NASA limited the bidding to existing payloads and UAVs, requiring that the proposals be submitted by research scientists, with UAV suppliers acting in a supporting role.

Eight of the eleven bids involve UAVs developed under NASA's Environmental Research Aircraft and Sensor Technology (ERAST) project. Five propose use of the General Atomics Altus UAV while three involve the Pathfinder-Plus or Helios solar-powered UAVs developed by AeroVironment.

Altus, for example, would be used to conduct a hurricane monitoring study, cloud and thunderstorm research. Either Helios or Pathfinder would handle an atmospheric water and climate change study. Pathfinder was also proposed to study disaster management and coffee growing. The Northrop Grumman Global Hawk would conduct an atmospheric chemistry study, the Vindicator UAV would monitor vineyards, or an Aerosonde UAV would be used to study hurricanes.